Manitoba Agriculture

Guidelines For Estimating
SWINE PRODUCTION COSTS
Based On A 150 Sow Herd, 2500 Hogs Sold

Information Update

DATE: January, 1992

This publication is intended to provide a format and a set of guidelines for determining costs of production for a hog enterprise. The cost figures listed in this budget are estimates and not figures obtained from an actual survey of the hog industry in Manitoba. Adjustments will be necessary when applying these figures to your own enterprise. The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the breeding stock, management practices, and facilities commonly employed on this size of an enterprise in Manitoba. Productivity and performance assumptions are based on data from national and provincial herd recording programs as well as data collected from numerous herds by feed companies and other organizations. Adjustments will be necessary where individual herd productivity and performance levels differ from those listed.

Accurate, up-to-date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

MG-15396

FARROW-FINISH PIG COST OF PRODUCTION

This publication is presented in three sections; farrow-finish, weaner and grower-finisher pig production. The weaner and grower-finisher enterprises are assumed to be separate entities. Each has its own feed mix-mill, office and loading space.

The one-page Farrow-Finish summary represents the union of the other two enterprises. Therefore, most of the costs shown in the Farrow-Finish summary are the sum of corresponding costs in the other two summaries. There are some exceptions to this, however, because some costs are eliminated when the weaner and grower-finisher enterprises join together. The savings gained by the farrow-finish enterprise are as follows:

1. No weanling cost is charged because pigs are not purchased, they are transferred.

2. No marketing and transportation costs for weaner pigs are charged to the farrow-finish operation because weaner pigs are transferred to another barn on the same property.

3. Death loss of weaner pigs is not shown as a separate cost item in the farrow-finish budget. However, death loss is included as a part of **every** cost item since each cost is calculated on a **per hog sold** basis.

4. Only one office and loading area are required.

5. Only one feed mix-mill is required. This reduces the cost of maintenance and repairs, insurance, depreciation and investment in equipment and buildings.

6. Interest on operating cost is calculated using the same method as in the farrowing enterprise.

FARROW-FINISH PIG COST OF PRODUCTION

A. OPERATING COSTS	Total	Your Cost	$/Hog Sold	Your Cost	$/Sow /Year	Your Cost	$/Pig Place	Your Cost
1. Feed Costs:								
1.01 Sow Lactation Ration	$ 6,255		$ 2.51		$ 41.70		$ 7.49	
1.02 Sow Gestation Ration	13,502		5.41		90.01		16.16	
1.03 Boar Ration	966		0.39		6.44		1.16	
1.04 Creep Feed	1,071		0.43		7.14		1.28	
1.05 Starter Ration	22,943		9.20		152.96		27.46	
1.06 Grower Ration	29,680		11.90		197.87		35.53	
1.07 Finisher Ration	57,540		23.07		383.60		68.88	
Total Feed Cost	$131,957		$ 52.91		$ 879.71		$157.96	
2. Other Operating Costs:								
2.01 Vet., Med. & Supplies	$ 8,010		$ 3.21		$ 53.40		$ 9.59	
2.02 Mtce. & Repairs	5,043		2.02		33.62		6.04	
2.03 Hydro (Heat)	9,129		3.66		60.86		10.93	
2.04 Insurance	3,243		1.30		21.62		3.88	
2.05 Manure Haulage	4,166		1.67		27.77		4.99	
2.06 Office Supplies	800		0.32		5.33		0.96	
2.07 Marketing & Trans.	11,847		4.75		78.98		14.18	
2.08 Sow Replacement	4,230		1.70		28.20		5.06	
2.09 Boar Replacement	1,157		0.46		7.71		1.38	
2.10 Stabilization Premium	9,727		3.90		64.85		11.64	
Subtotal Op. Costs	$189,308		$ 75.90		$1,285.05		$631.94	
2.11 Interest on Op.	4,958		1.99		33.66		16.55	
TOTAL OPERATING COSTS	**$194,266**		**$ 77.89**		**$1,318.71**		**$648.49**	
B. FIXED COSTS								
3. Depreciation:								
3.01 Buildings	$ 12,904		$ 5.17		$ 86.03		$ 15.45	
3.02 Equipment	24,629		9.87		164.19		29.48	
Total Depreciation Cost	$ 37,533		$ 15.05		$ 250.22		$ 44.93	
4. Investment:								
4.01 Buildings	$ 10,323		$ 4.14		$ 68.82		$ 12.36	
4.02 Equipment	9,851		3.95		65.68		11.79	
4.03 Breeding Herd	3,000		1.20		20.00		3.59	
Total Investment Cost	$ 23,175		$ 9.29		$ 154.50		$ 27.74	
TOTAL FIXED COSTS	**$ 60,707**		**$ 24.34**		**$ 404.72**		**$ 72.67**	
C. LABOUR								
50 hours/wk	$ 26,000		$ 10.42		$ 173.33		$ 31.12	
18.7 hours/wk	9,752		3.91		65.01		11.67	
TOTAL LABOUR COST	**$ 35,752**		**$ 14.33**		**$ 238.34**		**$ 42.80**	
TOTAL COST OF PRODUCTION	**$290,725**		**$116.56**		**$1,961.76**		**$763.95**	

BREAK-EVEN PRICE (carcass)	$/100 kg		$/CWT	
Operating Cost	$ 93.90		$42.59	
Operating & Labour Cost	111.18		50.43	
Operating, Labour & Fixed Cost	140.52		63.74	

Break-even Price = Cost per Hog Sold ÷ (Slaughter Wt. x Dressing % x Index)

WEANER PIG PRODUCTION COST SUMMARY

A. OPERATING COSTS	Total	Your Cost	$/Pig Sold	Your Cost	$/Sow /Year	Your Cost
1. Feed Costs:						
1.01 Sow Lactation Ration	$ 6,255		$ 2.41		$ 41.70	
1.02 Sow Gestation Ration	13,502		5.20		90.01	
1.03 Boar Ration	966		0.37		6.44	
1.04 Creep Feed	1,071		0.41		7.14	
1.05 Starter Ration	22,944		8.84		152.96	
Total Feed Cost	$ 44,738		$ 17.23		$ 298.25	
2. Other Operating Costs:						
2.01 Vet., Med. & Supplies						
Professional Services	$ 1,238		$ 0.48		$ 8.25	
Medication	3,405		1.31		22.70	
2.02 Maintenance & Repairs	3,108		1.20		20.72	
2.03 Hydro (Heat)	7,109		2.74		47.39	
2.04 Insurance	1,916		0.74		12.77	
2.05 Manure Haulage	1,971		0.76		13.14	
2.06 Office Supplies	800		0.31		5.33	
2.07 Marketing & Transportation	3,635		1.40		24.23	
2.08 Sow Replacement	4,230		1.63		28.20	
2.09 Boar Replacement	1,157		0.45		7.71	
Subtotal Operating Costs	$ 73,304		$ 28.23		$ 488.69	
2.10 Interest on Operating	1,920		0.74		12.80	
TOTAL OPERATING COSTS	**$ 75,224**		**$ 28.97**		**$ 501.49**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 7,526		$ 2.90		$ 50.17	
3.02 Equipment	16,026		6.17		106.84	
Total Depreciation Cost	$ 23,552		$ 9.07		$ 157.01	
4. Investment:						
4.01 Buildings	$ 6,020		$ 2.32		$ 40.13	
4.02 Equipment	6.411		2.47		42.74	
4.03 Breeding Herd	3,000		1.16		20.00	
Total Investment Cost	$ 15,431		$ 5.94		$ 102.87	
TOTAL FIXED COSTS	**$ 38,982**		**$ 15.01**		**$ 259.88**	
C. LABOUR						
50 hours/wk @ $10/hr	$ 26,000		$ 10.01		$ 173.33	
TOTAL LABOUR COST	**$ 26,000**		**$ 10.01**		**$ 173.33**	
TOTAL COST OF PRODUCTION	**$140,205**		**$ 54.00**		**$ 934.70**	

GROWER-FINISHER PIG PRODUCTION SUMMARY

A. OPERATING COSTS	Total	Your Cost	$/Hog Sold	Your Cost	$/Pig Place	Your Cost
1. Feed Costs:						
1.01 Grower Ration	$ 29,680		$ 11.90		$ 35.53	
1.02 Finisher Ration	57,540		23.07		68.88	
Total Feed Cost	$ 87,221		$ 34.97		$ 104.40	
2. Other Operating Costs:						
2.01 Weanling Cost	$106,002		$ 42.50		$ 126.89	
2.02 Veterinary Cost	3,367		1.35		4.03	
2.03 Maintenance & Repairs	2,469		0.99		2.96	
2.04 Hydro (Heat)	2,020		0.81		2.42	
2.05 Insurance	1,721		0.69		2.06	
2.06 Manure Haulage	2,195		0.88		2.63	
2.07 Office Supplies	299		0.12		0.36	
2.08 Marketing & Transportation	11,847		4.75		14.18	
2.09 Death Loss	4,415		1.77		5.28	
2.10 Stabilization Premium Cost	9,727		3.90		11.64	
Subtotal Operating Costs	$231,283		$ 92.73		$ 276.85	
2.10 Interest on Operating Cost	6,111		2.45		7.31	
TOTAL OPERATING COSTS	**$237,394**		**$ 95.18**		**$ 284.17**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 6,485		$ 2.60		$ 7.76	
3.02 Equipment	11,723		4.70		14.03	
Total Depreciation Cost	$ 18,207		$ 7.30		$ 21.79	
4. Investment:						
4.01 Buildings	$ 5,188		$ 2.08		$ 6.21	
4.02 Equipment	4,689		1.88		5.61	
Total Investment Cost	9,877		3.96		11.82	
TOTAL FIXED COSTS	**$ 28,084**		**$ 11.26**		**$ 33.62**	
C. LABOUR						
18.7 hours/wk @ $10/hr	$ 9,752		$ 3.91		$ 11.67	
TOTAL LABOUR COST	**$ 9,752**		**$ 3.91**		**$ 11.67**	
TOTAL COST OF PRODUCTION	**$275,230**		**$110.35**		**$ 329.46**	
BREAK-EVEN PRICE (carcass)	**$/100 kg**		**$/CWT**			
Operating Cost	$ 114.74		$ 52.05			
Operating & Labour Cost	119.46		54.19			
Operating, Labour & Fixed Cost	133.03		60.34			

Break-even Price = Cost per Hog Sold ÷ (Slaughter Wt. x Dressing % x Index)

WEANER PIG PRODUCTION COSTS - January, 1992
INPUT TABLES

ASSUMPTIONS

1. This input table outlines the cost of production for a sow farrowing operation only.
2. Buildings and equipment are valued at new cost.
3. Home-mixed feed is used.
4. Manure haulage is contracted out.
5. Gilts are purchased for herd replacement.
6. Weaner pig selling price = $42.50/pig sold.

TABLE 1 INDICATORS OF PRODUCTIVITY

Sows	150
Boars	9
Litters/Sow/Year	2.1
Average Weaning Age (days)	28
Average Born Alive per Litter	10.0
Percent Pre-Weaning Mortality	15.0
Percent Post-Weaning Mortality	3.0

TABLE 2 HERD PROFILE

	TOTAL	/SOW	/LITTER	%MORTALITY
Sows	150			
Boars	9			
Litters	315	2.10		
Pigs Born Alive	3,150	21.00	10.00	
Pigs Died, Pre-Weaning	473	3.15	1.50	15.0
Pigs Weaned	2,677	17.85	8.50	
Pigs Died, Post-Weaning	80	0.53	0.25	3.0
Weaner Pigs Sold	2,597	17.31	8.24	

TABLE 3 FEED REQUIREMENTS AND COSTS

		Feed Costs/Unit		
	Requirement	Purchased		Home-Mixed
Dry Sow Ration	2.3 kg/day	$ 0.00		$127.81/tonne
Nursing Sow Ration	4.7 kg/day	$ 0.00		$150.88/tonne
Boar Ration	2.3 kg/day	$ 0.00		$127.81/tonne
Creep Feed	0.5 kg/pig	$17.00	/25 kg	n/a
Starter Ration	27.0 kg/pig	$ 0.00		$327.27/tonne

TABLE 4 WEANER PIG EFFICIENCY

Days Post-Weaning	38	days
Target Weaning Weight	5.0	kg
Target Sale Weight	20.0	kg
Feed Conversion Ratio	1.80	kg starter ration/kg weight gain
Average Daily Gain	0.39	kg weight gain/day post-weaning

TABLE 5 CAPITAL COSTS - SOW BARN

	ft^2	Your Cost	$/ft^2$	Your Cost	Total	Your Cost	/Sow	Your Cost
Buildings:								
Gestation	4,050	_____	$ 13.50	_____	$ 54,675	_____	$ 364.50	_____
Farrowing/Nursing	4,725	_____	15.60	_____	73,710	_____	491.40	_____
Office & Loading	200	_____	19.60	_____	3,920	_____	26.13	_____
Feed Mill (building only)					18,200	_____	121.33	_____
Total Building Cost					**$150,505**	_____	**$1,003.37**	_____
Equipment:								
Gestation			$ 12.50	_____	$ 50,625	_____	$ 337.50	_____
Farrowing/Nursing			16.60	_____	78,435	_____	522.90	_____
Feed Mill (equipment only)					31,200	_____	208.00	_____
Total Equipment Cost					**$160,260**	_____	**$1,068.40**	_____
Total Buildings and Equipment Cost					**$310,765**	_____	**$2,071.77**	_____
Breeding Stock:								
Value of Replacement Sow	$220/sow				$ 33,000	_____	$ 220.00	_____
Value of Replacement Boar	$500/sow				4,500	_____	30.00	_____
Total Breeding Stock Cost					**$ 37,500**	_____	**$ 250.00**	_____
TOTAL CAPITAL INVESTMENT					**$348,265**		**$2,321.77**	

Cost per sow for buildings and equipment will vary depending on location around the province. However, it is generally around **$1742**/sow excluding feed mill (2,071 - 121 - 208) for larger units such as this one, and **$1900**/sow for smaller 50-80 sow units. Therefore, the cost per square foot may increase by 9-10% for smaller barns.

Cost assumes shallow manure pits in the barn are flushed to exterior holding pit which is then pumped to lagoon.

$1\ ft^2 = 0.0929\ m^2$; $1\ m^2 = 10.764\ ft^2$; $1\ ft = 0.3048\ m$

FEED REQUIREMENT AND COST SUMMARY - Prices given are for Oct 1/91, Winnipeg

DRY SOW RATION:	Ingredients	$/tonne	Ration Cost
Barley	825 kg	$ 72.88	$ 60.13
Canola Meal	115	$ 158.00	$ 18.17
Premix	45	$ 780.00	$ 35.10
Canola Oil	15	$ 642.50	$ 9.64
Total For Dry Sow:	1,000 kg		$123.04
Total Cost Adjusted For Weight Loss (1.25%)			$124.58
TOTAL COST PLUS PROCESSING COST		**$ 3.23**	**$127.81**

NURSING SOW RATION:	Ingredients	$/tonne	Ration Cost
Barley	307 kg	$ 72.88	$ 22.37
Wheat	495	$ 83.63	$ 41.40
Sub-total			$ 63.77
Soybean Meal	133	$ 256.50	$ 34.11
Premix	45	$ 780.00	$ 35.10
Canola Oil	20	$ 642.50	$ 12.85
Total For Nursing Sow:	1,000 kg		$145.83
Total Cost Adjusted For Weight Loss (1.25%)			$147.65
TOTAL COST PLUS PROCESSING COST		**$ 3.23**	**$150.88**

BOAR RATION:	Ingredients	$/tonne	Ration Cost
Barley	825 kg	$ 72.88	$ 60.13
Soybean Meal	115	$ 158.00	$ 18.17
Premix	45	$ 780.00	$ 35.10
Canola Oil	15	$ 642.50	$ 9.64
Total For Boar:	1,000 kg		$123.04
Total Cost Adjusted For Weight Loss (1.25%)			$124.58
TOTAL COST PLUS PROCESSING COST		**$ 3.23**	**$127.81**

STARTER RATION:	Ingredients	$/tonne	Ration Cost
Wheat	219 kg	$ 83.63	$ 18.31
Corn	397	$ 116.25	$ 46.15
Sub-total			$ 64.46
Soybean Meal	189	$ 256.50	$ 48.48
Canola Oil	20	$ 642.50	$ 12.85
Supplemental Protein (Base Mix)	175	$1,110.00	$194.25
Total For Starter:	1,000 kg		$320.04
Total Cost Adjusted For Weight Loss (1.25%)			$324.04
TOTAL COST PLUS PROCESSING COST		**$ 3.23**	**$327.27**

Nutrient Profile:	Dry Sow & Boar	Nursing Sow	Starter
Crude Protein	14.0 %	16.3 %	18.0 %
Metabolizable energy	2875 Kcal/kg	3100 Kcal/kg	3250 Kcal/kg
Lysine	0.65 %	0.75 %	1.25 %
Calcium	1.06 %	1.05 %	1.00 %
Phosphorus	0.97 %	0.95 %	0.80 %

GROWER & FINISHER PIG PRODUCTION COSTS - January, 1992
INPUT TABLES

ASSUMPTIONS

1. This Budget outlines the cost of production for a grower-finisher operation only.
2. Buildings and Equipment are valued at new cost.
3. Home-Mixed Feed is used.
4. Manure Haulage is contracted out.
5. Livestock values are based on an estimated Market Price (including stabilization payout) of:

$146.75/100 kg Mkt. Index 105
or: $0.67/lb Dressing % 79

TABLE 1 INDICATORS OF PIG PRODUCTIVITY

	Grower	Finisher	Total
No. of Pigs (Beginning)	2,597 pigs	2,545 pigs	--
Average Beginning Weight	20.0 kg	50.0 kg	--
Average Ending Weight	50.0 kg	100.0 kg	--
Percent Mortality	2.0 %	2.0 %	4.0 %
Days on Feed	50 days	70 days	120 days
Feed Conversion Ratio (1)	2.80	3.50	3.24
No. of Pigs (Ending)	2,545 pigs	2,494 pigs	--
Weight Gain/Pig	30.0 kg	50.0 kg	80.0 kg
Feed Intake/Pig	84.0 kg	175.0 kg	259.0 kg
Average Daily Gain	0.60 kg/day	0.71 kg/day	0.67 kg/day
Average No. of Pigs in Barn (2)	352 pigs	483 pigs	835 pigs

(1) FOOTNOTE: The Feed Conversion Ratio in the "Total" column is a weighted average of the other feed conversion ratios. Also note that an accurate feed conversion ratio for the grower-finisher enterprise is calculated by dividing "Total Feed used per Year" by "Total Gain per Year"; where "Total Gain per Year" equals "Total Hogs Sold" times "Gain per Hog". When calculated in this way, the feed conversion ratio includes feed lost through wastage and weight gain lost through death of pigs.

(2) FOOTNOTE: Assume that "Avg. No. of Pigs in Barn" equals "Pig Places".

TABLE 2 PRODUCTIVITY PROFILE

	Total	
Pigs Purchased	2,597	
Pigs Died	104	(4.0% mortality)
Pigs Sold	2,494	
Inventory Turnover	3.04	(365 days ÷ 120 days on feed)

TABLE 3 FEED REQUIREMENTS AND COSTS

	Feed Conversion Ratio	kg/pig	Home-Mixed Ration
Grower Ration	2.80	84.0	$141.62/tonne
Finishing Ration	3.50	175.0	$131.84/tonne

TABLE 5 CAPITAL COSTS - SOW BARN

	ft^2	Your Cost	$/ft^2$	Your Cost	Total	Your Cost	$ Per Pig Place	Your Cost
Buildings:								
Finishing Barn	7,686	_____	$ 13.80	_____	$106,063	_____	$ 126.96	_____
Office & Loading	288	_____	19.60	_____	5,645	_____	6.76	_____
Feed Mill (building only)					18,200	_____	21.79	_____
Total Building Cost					**$129,908**	_____	**$ 155.50**	_____
Equipment:								
Finishing Barn			$ 11.20	_____	$ 86,081	_____	$ 103.04	_____
Feed Mill (equipment only)					31,200	_____	37.35	_____
Total Equipment Cost					**$117,281**	_____	**$ 140.39**	_____
Total Buildings and Equipment Cost					**$247,189**	_____	**$ 295.89**	_____
Livestock					66,178	_____	$ 79.22	_____
TOTAL CAPITAL INVESTMENT					**$313,367**		**$ 375.11**	

A certified building plan designed according to average inventory of grower-finisher pigs must be used to calculate accurate dimensions and area for new buildings. See your local Agricultural Engineer for assistance.

Cost per square foot will vary with location around the province. However, it is generally around **$235**/place, excluding feed mill, for the larger units such as this one, and **$245**/place for smaller units. Therefore, cost/ft^2 may increase by 5% in the smaller units.

Feed Mill cost will vary with capacity.

Assume same manure handling system as in sow barn.

Footnote = 1 ft^2 = 0.0929 m^2; 1 m^2 = 10.7 ft^2

Footnote = Livestock Investment is calculated as follows:

$$\frac{[\text{Weaner Cost} + (\text{Pork Price} \times \text{Slaughter Wt.} \times 0.79)]}{2} \times \text{Avg. in Barn}$$

FEED REQUIREMENT AND COST SUMMARY - Prices given are for Oct 1/91, Winnipeg

GROWER:	Ingredients	$/tonne	Ration Cost
Barley	249 kg	$ 72.88	$ 18.15
Wheat	513	83.63	42.90
Sub-total			$ 61.05
Soybean Meal	83	256.50	21.29
Canola Meal	100	158.00	15.80
Premix	35	734.00	25.69
(20% Calcium, 11.0% Phosphorus)			
Canola Oil	20	642.50	12.85
Total For Grower:	1,000 kg		$136.68
Total Cost Adjusted For Weight Loss (1.25%)			$138.39
TOTAL COST PLUS PROCESSING COST		**$ 3.23**	**$141.62**

FINISHER:	Ingredients	$/tonne	Ration Cost
Barley	581 kg	$ 72.88	$ 42.34
Wheat	197	83.63	16.48
Sub-total			$ 58.82
Soybean Meal	45	256.50	11.54
Canola Meal	124	158.00	19.59
Premix	33	734.00	24.22
(20% Calcium, 11.0% Phosphorus)			
Canola Oil	20	642.50	12.85
Total For Finisher:	1,000 kg		$127.02
Total Cost Adjusted For Weight Loss (1.25%)			$128.61
TOTAL COST PLUS PROCESSING COST		**$ 3.23**	**$131.84**

Nutrient Profile:	Grower Ration	Finisher Ration
Crude Protein	17.0 %	16.0 %
Metabolizable Energy	3100 Kcal/kg	3000 Kcal/kg
Lysine	0.85 %	0.80 %
Calcium	0.90 %	0.85 %
Phosphorous	0.73 %	0.71 %

WEANER PIG PRODUCTION COSTS - January, 1992

WORKSHEET

A. OPERATING COSTS

1. Feed Requirements and Costs:

1.01 Sow Lactation Ration

			Your Farm
	28	days avg. weaning age	
x	2.10	litters/sow/year	
=	58.8	days lactation	
x	4.7	kg ration/day	
x	$150.88	/tonne ration	
÷	1,000	kg/tonne	
=	**$41.70**	**/sow/year**	

1.02 Sow Gestation Ration

	365	days/year	
-	58.8	days lactation	
=	306.2	days gestation	
x	2.3	kg ration/day	
x	$127.81	/tonne ration	
÷	1,000	kg/tonne	
=	**$ 90.01**	**/sow/year**	

1.03 Boar Ration

	365	days	
x	2.3	kg ration/day	
x	$127.81	/tonne ration	
÷	1,000	kg/tonne	
x	9	boars	
÷	150	sows	
=	**$6.44**	**/sow/year**	

1.04 Creep Feed

	0.5	kg ration/pig	
x	$17.00	/25 kg bag of feed	
÷	25	kg/bag	
x	21	pigs born alive/sow/yr	
=	**$7.14**	**/sow/year**	

1.05 Starter Ration

			Your Farm
	20.0	kg target sale weight	
-	5.0	kg target weaning wt.	
=	15.0	kg weight gain	
x	1.80	feed conversion ratio	
=	27	kg ration/pig	
x	$327.27	/tonne starter ration	
÷	1,000	kg/tonne	
x	17.31	pigs sold/sow/year	
=	**$152.96**	**/sow/year**	

2. Other Operating Costs:

2.01 Veterinary Medicine & Supplies

Professional services	$8.25	/sow/year	
Medication	$22.70	/sow/year	

2.02 Maintenance & Repairs

Building & equipment cost	$2,071.77	/sow	
Percent for rep. & mtce.	x 1.00	% /sow/year	
	= **$20.72**	**/sow/year**	

2.03 Electric Heat

Usage	1,170	kwh/sow	
Rate	x $0.0405	/kwh	
	= **$47.39**	**/sow/year**	

2.04 Insurance

Total capital investment	$2,321.77	/sow	
Insurance/$100 capital	x $0.55	/$100 capital	
	÷ 100		
	= **$12.77**	**/sow/year**	

2.05 Manure Haulage

Volume	30.0	litres/sow/day	
	÷ 1,000	litres/cubic m	
	= 0.0300	cubic metres	
Haulage rate	x $1.20	/cubic metre	
	x 365	days	
	= **$13.14**	**/sow/year**	

				Your Farm
2.06	**Office Supplies**			
	Number of sows	150	sows	
		x $ 2.00	fixed rate/sow	
		= $300.00		
	Minimum cost	+ $500.00		
		= $800.00		
		÷ 150	sows	
		= **$5.33**	**/sow/year**	
2.07	**Marketing & Transportation**			
	Weaner pigs sold	17.31	pigs/sow/year	
	Mktg. & trans. rate	x $ 1.40	/pig sold	
		= **$24.23**	**/sow/year**	
2.08	**Sow Replacement**			
	Value of replacement sow	$220.00	/sow replaced	
	less value of cull:			
	Cull sow weight	180	kg/cull	
	Cull sow price	x $81	/100kg (live)	
	Value of cull sow	= $145.80	/culled sow	
	Net replacement cost	= $ 74.20	(220.00 - 145.80)	
	Sow culling rate	x 38	percent	
	Sow replacement cost/sow	= **$ 28.20**	**/sow/year**	
2.09	**Boar Replacement**			
	Value of replacement boar	$500.00	/boar replaced	
	less value of cull:			
	Cull boar weight	225	kg/cull	
	Cull boar price	x $ 72.00	/100kg (live)	
	Value of cull boar	= $162.00	/culled boar	
	Net replacement cost	= $338.00	(500.00 - 162.00)	
	Number of boars in herd	x 9	boars	
	Boar culling rate	x 38	percent	
	Number of sows in herd	÷ 150	sows	
	Boar replacement cost/sow	= **$ 7.71**	**/sow/year**	

2.11 Interest on Operating Cost: Your Farm

Equation:

Sub-total Operating Cost x $\frac{\text{Farrow-to-Farrow Period}}{365}$ x $\frac{\text{\% Interest}}{2}$

Assumptions:

Sub-total operating cost = $488.67 /sow

Farrow-to-Farrow Period:

$= \frac{365}{\text{litters/sow/year}} = \frac{365}{2.10} =$ 174 days

Operating interest rate 11 %

Calculation:

$488.67 \times \frac{174}{365} \times \frac{0.11}{2} =$ **$12.80 /sow/year**

_____ x _____ x _____ = _____

365 2

B. FIXED COSTS

3. Depreciation: $\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings

Total building cost	$1,003.37	/sow	_____
Salvage value	- $0.00	/sow	_____
Useful life	÷ 20	years	_____
	= **$50.17**	**/sow/year**	_____

3.02 Equipment

Total equipment cost	$1,068.40	/sow	_____
Salvage value	- $0.00	/sow	_____
Useful life	÷ 10	years	_____
	= **$106.84**	**/sow/year**	_____

4. Investment: Average Value of Investment x Investment Rate — **Your Farm**

Investment Rate	**8.00**	**%**	

Note: Average value of investment = $\frac{\text{(Original Cost + Salvage Value)}}{2}$

4.01 Buildings

Total building cost	$1,003.37	/sow	
Salvage value	$0.00	/sow	
=	**$40.13**	**/sow/year**	

4.02 Equipment

Total equipment cost	$1,068.40	/sow	
Salvage value	$0.00	/sow	
=	**$42.74**	**/sow/year**	

4.03 Breeding Stock

Average value of breeding stock	$250.00	/sow	
=	**$ 20.00**	**/sow**	

C. LABOUR

Total hours per 7-day week		50.0	hours/week	
	x	52	weeks/year	
Hourly wage	x	$10	/hour	
	x	150	sows	
	=	**$173.33**	**/sow/year**	

GROWER & FINISHER PIG PRODUCTION COSTS - January, 1992

WORKSHEET

A. OPERATING COSTS

1. Feed Requirements and Costs:

1.01 Grower Ration

			Your Farm
	30.0	weight gain/pig	
x	2.80	feed conversion ratio	
=	84.0	kg ration/pig	
x	$141.62	/tonne ration	
÷	1,000	kg/tonne	
=	**$ 11.90**	**/pig sold**	

1.02 Finisher Ration

	50.0	weight gain/pig	
-	3.50	feed conversion ratio	
=	175.0	kg ration/pig	
x	$131.84	/tonne ration	
÷	1,000	kg/tonne	
=	**$ 23.07**	**/sow/year**	

2. Other Operating Costs:

2.01 Weanling Cost

	$42.50	/pig purchased	

2.02 Veterinary Cost

	$ 1.30	/pig purchased	
x	2,597	pigs purchased	
÷	2,494	pigs sold	
=	**$ 1.35**	**/pig sold**	

2.03 Maintenance & Repairs

	1	% of total capital invest.	
x	$247,189	total bldgs & equip cost	
÷	2,494	pigs sold	
=	**$ 0.99**	**/pig sold**	

2.04 Hydro (Heat)

			Your Farm
	60	kwh/pig place	
x	$0.0405	/kwh	
x	835	pig places	
÷	2,494	pigs sold	
=	**$ 0.81**	**/pig sold**	

2.05 Insurance

	$0.55	per $100 capital invested	
÷	100		
x	$313,367	total capital investment	
÷	2,494	pig sold	
=	**$ 0.69**	**/pig sold**	

2.06 Manure Haulage

	6.0	litres/pig/day	
x	365	days/year	
x	835	avg. inventory of pigs	
=	1,829,545	litres/year	
÷	1,000	litres/cubic metre	
=	1,829.54	cubic metres/year	
x	$1.20	/cubic metre	
=	$2,195.45	manure haulage cost	
÷	2,494	pigs sold	
=	**$0.88**	**/pig sold**	

2.07 Office Supplies

	$0.35	/pig place	
x	835	pig places	
÷	2,494	pigs sold	
=	**$0.12**	**/pig sold**	

2.08 Marketing & Transportation

	$4.75	**/pig sold**	

2.09 Death Loss

			Your Farm
	$42.50	/pig purchased	
x	104	pigs died	
÷	2,494	pigs sold	
=	**$1.77**	**/pig sold**	

Note: Because each cost item in the grower-finisher budget is expressed on a **per hog sold** basis, the cost of death loss is automatically included as a portion of every cost item. The only exception to this is the weanling cost item, which is expressed on a **per pig purchased** basis. Therefore, death loss is included as a separate item for weaners purchased **only**.

2.10 Interest on Operating Cost:

Formula:

$$(WC \times \frac{DOF}{365} \times \%\ Int) + [(SOC - WC) \times \frac{DOF}{365} \times \frac{\%\ Int}{2}]$$

Note:

WC = Weaner Cost
DOF = Days on Feed
% Int = % Operating Interest Rate
SOC = Sub-total Operating Cost

Assumptions:

WC	=	$42.50	/pig	
DOF	=	120	days	
% Int	=	11	%	
SOC	=	$92.73	/pig sold	
	=	**$ 2.45**	**/pig sold**	

B. FIXED COSTS

3. Depreciation: $\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings

Total building cost	$129,908		
Salvage value	- $0.00		
	= $129,908		
Useful life	÷ 20	years	
Pigs sold	÷ 2,494		
	= **$ 2.60**	**/pig sold**	

3.02 Equipment

Total equipment cost	$117,281		
Salvage value	- $0.00		
Useful life	÷ 10	years	
	= **$ 4.70**	**/pig sold**	

4. Investment: Your Farm

Formula:

$$\frac{(\text{Original Cost} + \text{Salvage Value})}{2} \times \text{Investment Rate}$$

4.01 Buildings

Total building cost		$129,908	
Salvage value	+	$0.00	
	=	$129,908	
	÷	2	
Investment rate	x	8	%
Pigs sold	÷	2,494	
	=	**$2.08**	**/pig sold**

4.02 Equipment

Total equipment cost		$117,281	
Salvage value		$0.00	
	=	**$1.88**	**/pig sold**

C. LABOUR

Formula:

Annual labour hours = 1 hour/day + 2 hours/day per 1,000 pig places

1 hour/day	=	365	hours/year
plus: 835 pig places			
x 2 hours/day/1,000 pig places			
x 365 day/year			
÷ 1,000 pig places	+	610	hours/year
Total hours/year	=	975	hours/year
Total hours/week	(or =)	18.8	hours/week
Hourly wage	x	$10.00	/hour
Pigs sold	÷	2,494	pigs sold
	=	$3.91	/pig sold

FORMULAS:

1. Percent mortality = $\frac{\text{Pigs died}}{\text{Pigs purchased}}$

2. Average feed conversion ratio (FCR) =

   (g = grower)
   (f = feeder)

   $$\frac{(FCR^g \times \text{wt. gain}^g) + (FCR^f \times \text{wt. gain}^f)}{\text{total weight gain/pig}}$$

3. Average daily gain (ADG) = $\frac{\text{total weight gained}}{\text{days on feed}}$

4. Feed intake/pig = total weight gain/pig x FCR avg.

5. Potential throughput = Pig places x turnover

6. Percent utilization of barn = $\frac{\text{average inventory}}{\text{pig places}}$

7. Break-even price ($/kg) = $\frac{\text{total cost of production/hog sold}}{\text{dressing \% x kgs per hog sold}}$

   or

   ($/lb) = $\frac{\text{total cost of production/hog sold}}{\text{dressing \% x lbs per hog sold}}$

FOR MORE INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE.

If you would like to run a number of alternatives through a computer program, please contact your local Manitoba Agriculture Office.

Budget
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